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AMSAT NEWS SERVICE
ANS-214

ANS is a free, weekly, news and information service of AMSAT North America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-214.01
North Texas Balloon Launch Number 17

AMSAT News Service Bulletin 214.01
  From AMSAT HQ SILVER SPRING, MD.
August 2, 2009
To All RADIO AMATEURS
BID: $ANS-214.01

AMATEUR RADIO GROUP TO FLY BALLOON FLIGHT FROM HILLSBORO TEXAS AIRPORT

The next mission number 17, named ï¿½Summer Time Bluesï¿½, to be held by the
North
Texas Balloon Project (NTEXBP) is planned for launch about 8:30 am on August
8,
2009 from the municipal airport in Hillsboro, Texas, just south of Fort Worth
and Dallas. Back up date is August 15, 2009. Two payload packages containing
sensors and amateur radios will be carried to nearly 100,000 feet in about
90
minutes by a helium balloon and return via parachute in about 50 minutes.
Mobile recovery teams will use position reports from the onboard GPS and APRS
transmitter on 144.390 MHz and radio direction finding techniques to recover the
payloads.

Pre-launch activities will begin about 7:00 am with the HF Launch Net on 7260
+/- 5 kHz, LSB beginning around 8:00 am. A cross band repeater will be activated soon after launch. Uplink is 445.800
MHz and downlink is 147.560 MHz.
Handheld VHF radios and scanners can receive the downlink easily. At the peak
altitude ham radio operators from Texas, New Mexico, Oklahoma, Arkansas, Louisiana, and Kansas can contact each other using the cross band repeater.

The radios used normally have a range of about 5 to 10 miles, but that range
will be extended to about 500 miles at the peak altitude. At the peak altitude,
the curvature of the earth is visible. Digital video is recorded for later
playback. APRS packets transmit the balloon's location about once a minute.

NTEXBP's Tommy Davis said, "In past operations we did the launches for fun
and
the enjoyment of flight. It involves many different facets of amateur radio
and
thus a project that many types of amateur radio operators can enjoy together.ï¿½
There is also an educational component utilized by scouting groups, because
it
involves orienteering and can be counted toward several different merit badges,
as well as by teachers for science experiments. Davis said, ï¿½Area scout
troops
are invited along with all that are interested.ï¿½

In the event of unfavorable weather or poor jet stream conditions, the launch
will occur at a later date. Be sure to check www.ntexbp.org or www.w5sjz.net
and other Ham Radio forums and news sources for later information.

The public is invited to come out to the
Hillsboro Municipal Airport, located at
Exit 3 on Interstate Highway 35W, to watch the launch.

North Texas Balloon Project is a group of amateur (HAM) radio operators from
Fort Worth and Dallas and has launched balloons from Cleburne, Clifton, and
Hillsboro airports since 1991. This is the first
launch during this year and is
funded by the amateur radio operators associated with the North Texas Balloon
Project.

Operatorï¿½s and Technical Data to follow at www.ntexbp.org or www.w5sjz.net.
Reports, questions, APRS and other data may be sent to NTEXBP by emailing
webmaster@ntexbp.org .

Please forward to interested Hams and ham communities. I would also appreciate
any announcement that could be made on local repeaters during allotted calls for
announcements. Thanks as always.

[ANS thanks Larry, K5PHD, for the above information]

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SB SAT @ AMSAT $ANS-214.02
Castor and Pollox Deployed From STS-127

AMSAT News Service Bulletin 214.02
From AMSAT HQ SILVER SPRING, MD.
August 2, 2009
To All RADIO AMATEURS
BID: $ANS-214.02

Castor and Pollox, two satellites in the Atmospheric Neutral Density Experiment
(ANDE) program were successfully deployed from STS-127 after it undocked from
the International Space Station

The ANDE mission consists of two spherical spacecraft fitted with retro-reflectors for satellite laser ranging (SLR). The constant and well-determined cross section and surface properties of the ANDE spacecraft
provide an ideal set of objects for monitoring atmospheric drag and the calibration of space surveillance network (SSN) assets both radar and optical.

Castor
Castor is a 19 inch diameter aluminum sphere with a mass of 63 kg. The satellite has several different types of sensors. There are two main sensors, a Neutral particle wind and temperature spectrometer and an ion mass
spectrometer. A group of college students designed and built a MEMS sensor
payload to test
some commercial gyroscopes and a magnetometer. There are also six light sensors
and six temperature sensors mounted in the satellite hemispheres.

Pollox
The Pollux satellite was originally to be a passive satellite with retroreflectors for laser ranging. It has been
turned into a high school student
project involving several schools in the Fairfax County, Virginia area. The electronics is based on cubesat hardware developed at the Naval Research
Laboratory and Stensat Group LLC.

The communications board contains the transmitter and receiver. The transmitter
operates at 2 meters and can put out up to 1 watt of signal. Power level is
adjustable. The transmitter can operate at 1200
baud AFSK and 9600 baud FSK. The
transmitter uses the AX.25 protocol. An experimental FX.25 protocol will be

tested that adds forward error correction capability to the AX.25 protocol
and
still allows typical TNCs to decode the packets.

Both satellites will transmit on 145.825 MHz. Additional details about the
telemetry format, as well as the FX.25 and GMSK experiments can be found at
https://goby.nrl.navy.mil/ANDE/Main.html

[ANS thanks Ivan, KD4HBO, for the above information]

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SB SAT @ AMSAT $ANS-214.03
Amateur Radio Newsline 2009 "Young Ham of the Year" Announced

AMSAT News Service Bulletin 214.03
From AMSAT HQ SILVER SPRING, MD.
August 2, 2009
To All RADIO AMATEURS
BID: $ANS-214.03

"Wow! Oh, my God. All my friends here at Seabase are going to be really impressed. Oh, my God!"

And, that's how it sounded when we caught up with Andrew Koenig, call letters KE5GDB, by cellphone at the Boy Scouts of America Seabase in Key West, Florida, where he had just arrived with members of Troop 848 from Houston for a week of scuba diving adventures.

The Life Scout, who is just shy of his 16th birthday, is working to earn the Eagle rank and was ecstatic to learn he had been chosen for special recognition by the Amateur Radio Newsline. Before telling him he had been
selected as the Young Ham of the Year, we asked Andrew how he might feel if
he were to receive such an award. He said it would be a nice honor to share
with his mentors, including his award nominator Nick Lance, call letters KC5KBO, who has helped several NASA astronauts earn their ham tickets.

"Young Ham of the Year would probably go in the book of things that I've done in ham radio that they are really impressed with," Andrew said. "It would just mean a lot to me.

"Nick Lance, he hasn't really been pushing me to do anything. A lot of the
stuff I discover on my own. But, he's one of the big roles, one of the key
aspects in ham radio and it would give him a really good feeling to know that one of his students went on to get youth ham of the year."

Andrew holds a General class license and passed the test for his first ticket back in 2005 while a sixth-grader at the Westbrook Intermediate School in Houston where Lance - who is retiring in August from the Johnson
Space Center - teaches an amateur radio license class.

Andrew is the son of Joe and Lauri Koenig of Houston. Joe holds the call letters KE5JQA and got licensed as a result of Andrew's interest. Andrew also has a younger brother, Kyle.

Among the achievements Andrew has accomplished is helping with an Amateur
Radio on the International Space Station (ARISS) contact at the Westbrook
Intermediate School.

"I actually helped test a lot of the equipment for the contact, since it
was a telebridge contact," Andrew recalled. "The station that was actually
contacting the ISS was in California, I believe.

"And, we were in Clear Lake, Texas. So, for some reason the phone patch
wasn't working properly. So, I had to actually go into one of the school
phones and test that - I think about 15 minutes worth of testing before the
contact started. And, finally right on time, we got it going again and
everything was working just fine."

The contact with Astronaut Clay Anderson, who holds the ham radio call sign
KD5PLA, was a success - thanks to Andrew.

Andrew also helped facilitate a terrestrial contact between Astronaut Chris
Hadfield (ham radio call letters KC5RNJ and VA3OOG) and students at two
Canadian schools using an Internet Repeater Linking Project (IRLP) node he
had built and placed in his bedroom closet.

Andrew, who enjoys VHF and UHF operations, tried and tried and was finally
successful in making his own contact with the space station using his
handheld radios and portable directional antenna. He also has participated
in training astronauts at the Johnson Space Center on ARISS contacts with
schools, conducting simulated contacts with them, playing the role of the
school students.

Andrew has also been quite active with public service events through the
Clear Lake Amateur Radio Club in suburban Houston where he is immediate
past vice president. He is also a member of the Seabrook Citizen's
Emergency Response Team.

   Among his other achievements is creating his own bicycle mobile setup:

"I had tried putting a handi-talkie on my bike and I wasn't impressed with
the results because the rubber duck just didn't get out as far as I wanted
to," Andrew recalled. "A couple months before, I had ordered my first
mobile rig (radio), the FT-7800.

"And, actually a couple weeks before I decided to put it all together on
the bike, I had bought a brand new gel cell battery. So, I thought, you
know, hey I've got this remote that came free with the radio, I've got the
battery, I've got an antenna, I got everything I need to make it happen.
So, I just mounted it all on the bike with zip ties and I had 50 watts
mobile on a bike for VHF and UHF."

That attracted some attention from CQ magazine, which was looking for photo ideas for its 2008 calendar. Photographer Larry Mulvehill (WB2ZPI) visited Houston and Andrew's bicycle mobile became the calendar photo for September 2008. He and his bedroom-closet IRLP node will be featured the cover of the September 2009 issue of CQ magazine.

Andrew is going into his sophomore year at Clear Lake High School where he is a member of the school's marching band. He is also into computers and creating websites and he maintains his own website started when he was in middle school. Check out www.thathamkid.com. It offers kid-friendly information about ham radio, along with a jokes page and a lot more about Andrew's activities in amateur radio - including his working satellites.

His mentor and nominator for this award, Nick Lance, KC5KBO, summed it up best when he said: "Andrew has truly been an outstanding student of amateur radio.....He is an inspiration both to his fellow students and to hams of all ages."

Award Ceremony

The 2009 Amateur Radio Newslineï¿½ "Young Ham of the Year Award" will be presented to Andrew Koenig, KE5GDB, on Saturday, August 15th, 2009 at the Huntsville Hamfest in Huntsville, Alabama. As the 2009 "Young Ham of the Year," Andrew will receive -- courtesy of Vertex-Standard -- an expense-paid trip to the Huntsville Hamfest, along with a gift of Yaesu brand ham radio equipment. CQ magazine will treat him to an expense-paid week at Spacecamp Huntsville, and will present Andrew with a variety of CQ products. Amateur Radio Newslineï¿½ will provide Andrew with a commemorative plaque at the award ceremony. Once again, the cost of year's plaque has been underwritten by Dave Bell (W6AQ), President of DBA Entertainment Inc., Hollywood California. Heil Sound Ltd. will also be presenting Andrew with a ham radio related gift.

The presentation of the award as a regular feature of the Huntsville Hamfest has been made possible through the generosity and kindness of the event's Planning Committee and the good offices of Huntsville Hamfest Association Vice President Charlie Emerson, N4OKL. (See http://www.hamfest.org)

This year's award ceremony will be hosted by Don Wilbanks (AE5DW) of Amateur Radio Newslineï¿½ along with representatives of corporate underwriters Vertex-Standard and CQ Communications, Inc.

Award Program Background

The Amateur Radio Newslineï¿½ "Young Ham of the Year" award (formerly the Westlink Report Young Ham of the Year Award) has been presented

annually
since 1986 to a licensed radio amateur (Ham) who is 18 years of age or younger and who has provided outstanding service to the nation, his/her community or the betterment of the state of the art in communications through the Amateur Radio hobby/service. It maintains a website will full
information on the award program and background material located at http://www.arnewsline.org.

Award Sponsors

The award program is jointly sponsored by the Los Angeles, California-based
Amateur Radio Newslineï¿½ with corporate support from Vertex-Standard Corporation of Cerritos, California and CQ Magazine of Hicksville, NY.

Since 1976, the Southern California-based Amateur Radio Newslineï¿½ and its
predecessor, the Westlink Radio Network, have been providing radio amateurs
around the world with up-to-the-minute news at no cost to them. Amateur Radio Newslineï¿½ also co-sponsors with the Quarter Century Wireless Association the "Roy Neal, K6DUE, Amateur Radio Mentoring Project" that serves as a clearinghouse to match radio amateurs in need of educational assistance on the hobby with those able to aid them. (See http://www.arnewsline.org)

The award's two corporate underwriters are world leaders in their respective areas of Amateur Radio product support.

Vertex-Standard Corporation is considered the trailblazer in the design, manufacture and distribution of high quality Vertex-Standard commercial two-way radio, monitoring and air-band communications equipment along with
its Standard Horizon marine electronics line and Yaesu brand Amateur Radio
equipment. The Yaesu name is known world-wide among ham radio aficionados
and is synonymous with premium quality ham radio gear. (See http://www.vertexstandard.com)

CQ Magazine and its sister publications, CQ VHF, Popular Communications and
WorldRadio Online, are published by CQ Communications, Inc., and are considered the trend-setting publications serving todayï¿½s modern radio amateur. (See http://www.cq-amateur-radio.com)

[ANS thanks Newsline for the above information]

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SB SAT @ AMSAT $ANS-214.04
DRAGONSat Deployed From STS-127

AMSAT News Service Bulletin 214.04
  From AMSAT HQ SILVER SPRING, MD.
August 2, 2009
To All RADIO AMATEURS
BID: $ANS-214.04

DRAGONSat, the Dual RF Astrodynamic GPS Orbital Navigator Satellite, was deployed from from the cargo bay of STS-127 after the shuttle departed from

the
International Space Station. The DRAGONSat mission consists of two
satellites,
BEVO-1 and AggieSat-2.

BEVO-1 Downlink Information:
Beacon Mode
Downlink Freq: 437.325 MHz
Modulation: FM, 200mW, Morse Code, ~20 WPM

Data Mode
Downlink Freq: 437.325 MHz
Modulation:
GMSK, 1W, 9600 baud, AX.25 (default)
FM, 1W, Bell 202, AX.25
http://www.utexas.edu/news/2009/06/09/picosatellite/

AggieSat-2
http://aggiesat.org/Home
436.250MHz

AggieSat2 operating mode uses a proprietary modem
protocol as the main radio is a COTS data modem. It appears the only way
to decipher the code is to have a model MHX425 that can speak the
proprietary language. The radio data rate is actually at 19200 bps.

Initial indications are that it appears Bevo and AggieSat are stuck
together
right now. We are looking for aliveness confirmation until we can get
the
units
in a stable state.

[ANS thanks John, KE5JTG, for the above information]

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SB SAT @ AMSAT $ANS-214.05
Satellite Shorts From All Over

AMSAT News Service Bulletin 214.05
  From AMSAT HQ SILVER SPRING, MD.
August 2, 2009
To All RADIO AMATEURS
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+ Presentations from the AMSAT-UK Colloquium can be viewed at:
   http://www.uk.amsat.org/component/option,com_wrapper/Itemid,278/

+ The Gator Amateur Radio Club at University of Florida has posted
   a tutorial for Downloading and Decoding CP6 satellite data using
   the KPC-9612 Plus TNC, ICOM-910, SatPC32 and CPX Data Decoder Soft-
   ware at http://www.gatorradio.org/CP6_tutorial.pdf
   (Dr. Jay Garlitz, AA4FL)

+ The Houston AMSAT Net now being heard on Echolink in the conference
   AMSAT Wednesday 0100UTC (Tuesday 8PM Central) has moved to a new
   IRC Channel (Internet Relay Chat) at:
   IRC Server: irc.radiochat.org
   PORT: 6667
   Group: #amsat

+ A video replay of the ANDE deployment from STS-127 can be seen at:
   http://www.youtube.com/watch?v±9rIEZwTJU

+ European and Mediterranean stations may wish to be on the lookout
   for Paulo, CT1ETE/P from grid IM57sc betweem August 1-7 on the
   VO-52, AO-27, SO-50 and AO-51 satellites. Paulo plans to use a
   Yaesu FT-817ND and Arrow Antenna.

+ Scientific American magazine has an article on-line, "Space Aged:
   10 Spacecraft from Decades Past That Are Still Ticking". This
   slide show includes AO-7: http://preview.tinyurl.com/kuryu9

+ A very nice interactive web site covering the entire Apollo 11
   mission can be found at: http://www.wechoosethemoon.org/

[ANS thanks everyone for the above information]

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SB SAT @ AMSAT $ANS-214.06
ARISS Status - 27 July 2009

AMSAT News Service Bulletin 214.06
  From AMSAT HQ SILVER SPRING, MD.
August 2, 2009
To All RADIO AMATEURS
BID: $ANS-214.06

1. Upcoming School Contacts

An Amateur Radio on the International Space Station (ARISS) contact has
been
scheduled for United Space School in Seabrook, Texas on Wednesday,
August 5
at
13:47 UTC via telebridge station ON4ISS. The school is a once a year
session
of
high school students that meets annually in the NASA/Clear Lake Area.
These
students come from around the world for a two week session, during which
they
stay with local host families while being
mentored by astronauts, engineers, and
scientists to design a mission to Mars as their team project. Class
sessions
are held at the University of Houston at Clear Lake. The contact will
allow
students to learn firsthand what the experience of spaceflight is like.
They
may ask questions about the skills needed to be an astronaut, the
effects of
weightlessness on the body, the food eaten, leisure activities, etc.
They
will
use this knowledge in putting together their team project presentation,
which
they will present to the Houston space community at the end of their
session.

2. De Winne has ARISS Contact with Portuguese Students

On Tuesday, July 21, an Amateur Radio on the International Space Station (ARISS) contact took place between students attending Escola E.B.2/3 de S. Romï¿½o do Coronado in Trofa, Portugal and Frank De Winne, ON1DWN on the ISS. De Winne answered 16 questions put to him by the students. Media coverage included two television stations and the event was highlighted in the evening news.

3. De Winne Participates in ARISS Contact with Ugo Guidi

On Thursday, July 23, children from Ugo Guidi in Forte dei Marmi, Lucca, Italy participated in an Amateur Radio on the International Space Station (ARISS) contact. Frank De Winne, ON1DWN answered twenty questions posed to him by the students. The audio and video were available on: www.ondaforte.tv. OndaForteTV, local media and newspapers covered the event.

4. ARISS Member Comments on Lunar Landing in EE Times

EE Times published a July 20 special edition that tells the lunar landing story from the viewpoint of a number of engineers. Comments were included from a number of people who felt it was a very personal event in their lives. Comments by Amateur Radio on the International Space Station (ARISS) member Steve Bible, N7HPR may be found on page 44. See: http://www.nxtbook.com/nxtbooks/cmp/eetimes_apollo_20090720/index.php

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU4OS